

JPRS-TTP-90-011
11 SEPTEMBER 1990



JPRS Report

Telecommunications

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

DTIC QUALITY INSPECTED 8

19981123 072

Telecommunications

JPRS-TTP-90-011

CONTENTS

11 September 1990

SUBSAHARAN AFRICA

INTER-AFRICAN AFFAIRS

PANA Launches Computerized System [Victor Adefela; Dakar PANA, 7 Sep 90]	1
RSA Ceases Radio Truth Broadcasts Into Zimbabwe	1
STAR Says Propaganda Broadcasts Silenced [Gerald L'Ange; Johannesburg THE STAR, 5 Sep 90]	1
Radio Truth Refutes Reports of 'Demise' [Radio Truth to Zimbabwe, 5 Sep 90]	2

CAMEROON

FM Station Planned for Douala, TV Vans for Provinces [Yaounde Domestic Service, 27 Aug 90]	2
---	---

MOZAMBIQUE

France Signs Three Joint Cooperation Accords [Maputo Domestic Service, 30 Aug 90]	2
Radio Posts for Nampula Province's Rural Areas [Maputo Domestic Service, 3 Sep 90]	2

SOUTH AFRICA

State To Separate Postal, Telecommunications Services [Johannesburg SAPA, 9 Sep 90]	3
---	---

CHINA

Weekly Examines Carrier Rocket Program [Xu Jian; Beijing BEIJING REVIEW, 3-9 Sep 90]	4
Second Weather Satellite Successfully Launched 3 Sep [Su Kuosan; Beijing Domestic Service, 3 Sep 90]	5
Beijing Economic Radio Station To Begin Broadcast [Beijing BEIJING RIBAO, 22 Sep 90]	6
Television Station Cooperation Group Achieves Good Results [Zhang Jianmin, Hui Jinyi; Beijing XINHUA, 8 Sep 90]	6

EAST ASIA

INTER-ASIAN AFFAIRS

Japan Proposes Plan to Boost Asian Telecommunications [Tokyo KYODO, 11 Sep 90]	7
--	---

AUSTRALIA

Government Telecommunications Monopoly To End [Hong Kong AFP, 10 Sep 90]	7
--	---

CAMBODIA

Cambodian Radio, TV Chief Interviewed on Operations [Hanoi Domestic Service, 7 Sep 90]	8
--	---

JAPAN

NTT Announces Experimental Broadband ISDN System [Tokyo KYODO, 11 Sep 90]	8
Broadcast Satellite 'Limping Along at Three-Quarters Power' [Tokyo KYODO, 31 Aug 90]	9
KDD To Start Video Conference Service With UK [Tokyo KYODO, 5 Sep 90]	9

SOUTH KOREA

- Daewoo To Produce Satellite Receivers for Japan [*Seoul THE KOREA TIMES, 1 Sep 90*] 9
Satellite Technology Research Center Opened [*Seoul THE KOREA TIMES, 1 Sep 90*] 9

THAILAND

- Communications Minister Reports Help Sought by Laos [*Bangkok Domestic Service, 10 Sep 90*] . 10

VIETNAM

- Microwave Systems Link Hanoi, 14 Northern Provinces [*Hanoi VNA, 8 Sep 90*] 10

EAST EUROPE

INTRABLOC AFFAIRS

- East Europe Said 20-25 Years Behind West [*Brussels EUROPE, 15 Jun 90*] 11

CZECHOSLOVAKIA

- Director Urges Immediate Debate on Radio, TV Bills [*Prague Domestic Service, 6 Sep 90*] 11

GERMAN DEMOCRATIC REPUBLIC

- Radio Berlin International to Cease Transmission
[*East Berlin ADN International Service, 6 Sep 90*] 12

HUNGARY

- TV To Assume Public Service, Commercial Character [*Budapest Domestic Service, 4 Sep 90*] 12

ROMANIA

- Protocol on Communications With Moldavia SSR [*Bucharest ROMPRES, 7 Sep 90*] 12

LATIN AMERICA

ARGENTINA

- DYN, REUTERS Sign Cooperation Agreement [*Buenos Aires DYN, 2 Sep 90*] 13

BRAZIL

- Satellite Launch Contract Signed With French Company [*Brasilia Domestic Service, 3 Sep 90*] 13

COLOMBIA

- Changes in Telecommunication Services
[*Ana Lucia Duque Salazar; Bogota EL TIEMPO, 22 Aug 90*] 13

CUBA

- Future TV, Radio Marti Jamming Plans Announced [*Havana Radio Rebelde, 10 Sep 90*] 14

ECUADOR

- Radio Sucre Closure Called 'Unconstitutional' [*Paris AFP, 7 Sep 90*] 15

PANAMA

Television Channel Assigned to Catholic Church Foundation [Carlos Vargas; Panama City EL PANAMA AMERICA, 1 Sep 90]	15
---	----

NEAR EAST & SOUTH ASIA

INDIA

Role of Telecommunications in Economic Development [New Delhi PATRIOT, 21 Jul 90]	17
Cable-Cum-Wireless Rural Telephone System Developed [New Delhi PATRIOT, 28 Jul 90]	18
Center Urged to Develop Long Term Telecom Policy [New Delhi PATRIOT, 25 Jul 90]	18
New Radio Station Inaugurated at Nizamabad [Delhi Domestic Service, 9 Sep 90]	19

IRAN

Television Station Commissioned in Zahedan [Tehran Domestic Service, 1 Sep 90]	19
New TV Repeater Commissioned in Siah Cheshmeh [Tehran Domestic Service, 1 Sep 90]	19

PAKISTAN

Launching of Satellite Reported	19
Badr I, Pakistan's First [Lahore THE PAKISTAN TIMES, 17 Jul 90]	19
President, Prime Minister's Messages [Lahore THE PAKISTAN TIMES, 17 Jul 90]	20

SUDAN

Cooperation Agreement Signed Between SUNA, JANA [Khartoum SUNA, 1 Sep 90]	20
---	----

SOVIET UNION

Cable Television Developments in Rostov-na-Donu [Moscow IZVESTIYA, 7 Sep 90]	21
Yerevan Reports Communications Cut in NKAO [Yerevan Domestic Service, 6 Sep 90]	21

WEST EUROPE

EUROPEAN AFFAIRS

EC Telecommunications Council Meets 28 Jun	23
Meeting Results [Brussels EUROPE, 30 Jun 90]	23
Statement on Market Reciprocity [Brussels EUROPE, 2-3 Jul 90]	24
EC Proposes Cordless Phone Standard [Brussels EC INFORMATION MEMO, 8 May 90]	25

BELGIUM

Digital Telephone Venture With USSR [Groot-Bijgaarden DE STANDAARD, 20 Jun 90]	26
--	----

CYPRUS

CYTA To Join Worldwide Communications System [Nicosia CYPRUS MAIL, 5 Sep 90]	26
--	----

FEDERAL REPUBLIC OF GERMANY

Deutsche Welle to Strengthen External Broadcasting Role [East Berlin ADN, 3 Sep 90]	26
---	----

FRANCE

French Telecom Industry Presents White Paper [Michel Heurteaux; Paris ELECTRONIQUE HEBDO, 12 Apr 90]	27
---	----

INTER-AFRICAN AFFAIRS

PANA Launches Computerized System

AB0809075690 Dakar PANA in English 1349 GMT
7 Sep 90

["Special Report" by Victor Adefela]

[Excerpt] Dakar, 7 Sept (PANA)—The PAN-AFRICAN NEWS AGENCY (PANA) today enters a new and significant stage in its development with the formal launching of the computerization of its editorial operations.

The PANA computer system consists of two central computers, which are being used for the reception, storage and transmission of news and other messages, and 16 personal computers which are being used by the journalists for the writing and editing of news and features.

The installation and testing of the system began in mid-June and the journalists in the agency's central newsroom have already started using it. The result has been remarkable. The use of computers has made it possible to eliminate most of the manual operations involved in the old mode of news processing and brought about a sharp increase in the speed with which news is written and edited.

Before the arrival of the computers, news was written and edited with typewriters or by hand, and tapes had to be manually perforated to permit its transmission by telex operators after the copy had been checked and re-checked by the editors. This resulted in a lot of time being lost and a sizeable proportion of news received from the national news agencies not being attended to promptly and, consequently, becoming stale.

That now is history. With the introduction of computers, the journalists in PANA's central newsroom are able to process all the news received each day and the turn-around time for each news item has been considerably reduced.

It is not only the processing of news that has been positively affected by computerization. Its reception and transmission have also benefitted from the introduction of this new technology. All the PANA specialised and telex lines are linked directly with the central computers and all the in-coming flow of news is promptly routed to the appropriate desks for processing. Similarly, all out-going traffic is coded for automatic routing to the various destinations.

The system is not being used to full capacity yet and the journalists in the PANA newsroom find their work much easier now, as they sometimes have to wait for news to arrive from the national news agencies. But it is expected that, as more and more African news agencies become computerized and there is an increase in the volume of their production, the capacity of the PANA system will be fully utilized.

The computerization of PANA has come at a most opportune time when the agency is beginning to take measures to sell its services to the rest of the world. The use of computers will, no doubt, make this much easier, especially with regard to prospective clients who are already using this advanced technology.

PANA's computer system is part of a project for the modernisation of the communication facilities of some African news agencies which is being carried out with the financial assistance of the Italian Government. The project was initiated by the Inter Press Service (IPS), a Third World news agency based in Rome, which is also its executing agency. The total cost of the project is 1.85 million US dollars and the PANA computer system was set up with 350,000 US dollars out of this amount.

In addition to PANA, the project currently involves five other African agencies. These are APS of Senegal, NAN of Nigeria, ZANA of Zambia, AIM of Mozambique, and SHIHATA of Tanzania. The systems for APS and NAN have already been installed and the other three agencies will have theirs set up soon. [passage omitted]

RSA Ceases Radio Truth Broadcasts Into Zimbabwe

STAR Says Propaganda Broadcasts Silenced

MB0509100590 Johannesburg THE STAR in English
5 Sep 90 p 1

[Report by Gerald L'Ange, of THE STAR's Africa News Service: "SA Silences Radio Truth Propaganda"]

[Text] In a major move to mend diplomatic fences, South Africa has silenced the propaganda broadcasts it had been beaming into Zimbabwe through the clandestine radio station named Radio Truth.

The broadcasts, believed to have come from a transmitter somewhere in the Transvaal, are known to have caused much irritation to the Zimbabwe government.

They have contributed substantially to the deterioration in relations between the two governments, and to South Africa's reputation for destabilising neighbouring countries.

The closure of the station is expected by knowledgeable observers to be followed by other moves to improve relations.

It has been widely assumed that the station was operated by one of the South African security services. Its closure therefore appears to be a victory for South Africa's diplomats over the "Securocrats".

There has been no reaction from the Zimbabwe government.

Radio Truth Refutes Reports of 'Demise'

MB0509201690 (Clandestine) Radio Truth in English to Zimbabwe 1730 GMT 5 Sep 90

[Text] Following erroneous press reports of his demise, a well known humanist once responded: "I wish to assure you that the reports of my death are exaggerated." We site this quotation in reference to an item in the last issue of the ruling party's weekly newspaper, THE PEOPLE'S VOICE, which stated that Radio Truth had gone off the air. This is obviously due to a misunderstanding concerning the lead item in our broadcasts on 16 August. It referred to a report on the historic [Word indistinct] in the ZANU-PF [Zimbabwe African National Union - Patriotic Front] Politburo, in which the majority of members were said to have expressed support for the retention of our [word indistinct] party democracy.

We remarked that this created a new and (?exciting climate) in the radio world, and would allow us to change [word indistinct] in our news presentation.

We understand that the thrust of the Politburo debate, although subsequently challenged by the [word indistinct] spokesman, [words indistinct] correct our views on the substantial proportion of the leadership in our ruling party.

[word indistinct] to Dr. Chidzero's promise of a liberated economy, and the [word indistinct] of a greater measure of press freedom, we determined that our country was on the threshold of a new era, which we would do all in our power to promote.

In view of the new and enlightened policies that seemed to be taking shape in the ruling party, it may be considered that this station has served its purpose and achieved its principle objectives. In those circumstances we may decide of our own volition to cease the broadcasts under the title of Radio Truth.

CAMEROON**FM Station Planned for Douala, TV Vans for Provinces**

AB3100193690 Yaounde Domestic Service in English 1800 GMT 27 Aug 90

[Text] A city FM radio station in Douala and external TV broadcasting vans for some provincial stations will soon be installed. These revelations were made this morning here in Yaounde by Prof. Mendonze, CRTV [Cameroon Radio and Television Service] general manager at an opening session of a two-day general meeting of the corporation.

Opening the workshop, the minister of information and culture and chairman of CRTV's board of directors, Henri Bandolo, spoke of the need to disseminate with accuracy complete and reliable information. He said the CRTV which is the child of the New Deal Government

should be able satisfy all its audience so that they can be proud of their radio and television.

The CRTV workshop, which is continuing in commissions, is expected to come up with concrete plans and methods geared at enhancing the competitiveness of its programs with a view to better responding to the exigencies of the general changes which the country is undergoing.

MOZAMBIQUE**France Signs Three Joint Cooperation Accords**

MB3008192090 Maputo Domestic Service in Portuguese 1730 GMT 30 Aug 90

[Text] France is to invest some \$2.1 million in agricultural and telecommunications development projects under the terms of three accords signed in Maputo on 29 August.

French aid aims to rehabilitate the family sector's agricultural activity in Chokwe, Gaza Province, by providing heavy machinery and spare parts to the peasants.

Under the terms of the accords signed by Cooperation Minister Jacinto Veloso and French Ambassador to Mozambique Daniel Jouanneau, France will also finance the establishment of a direct telecommunication link between Maputo and Reunion Island, in the Indian Ocean [two-second break in transmission] by Paris. The link will done by means of the Telecomm-I satellite between Reunion Island's Cyclone Warning Center and the Mozambique Meteorological Services, thereby permitting more effective work to observe cyclones and prevent damage.

One of the accords provides for French support to the Economic and Social Rehabilitation Program, PRES, by assisting with financial administration.

Radio Posts for Nampula Province's Rural Areas

MB0309190490 Maputo Domestic Service in Portuguese 1730 GMT 3 Sep 90

[Text] With the aim of reducing the isolation of the rural areas in relation to the cities, a number of radio posts will soon be installed in Nampula Province.

A source in Mozambique Telecommunications Enterprise's Nampula branch has disclosed that, in its first phase, the project will be implemented in five districts where conditions are deemed favorable.

SOUTH AFRICA

State To Separate Postal, Telecommunications Services

*MB0909131890 Johannesburg SAPA in English
1115 GMT 9 Sep 90*

[Text] Pretoria Sept 9 SAPA—South Africa's postal and telecommunications [SAPT] system will not be privatised, according to the postmaster general, Mr Johan de Villiers.

Mr de Villiers made the announcement in a SABC [South African Broadcasting Corporation] television broadcast on Sunday [9 September] in which he sketched out the plans for dividing SAPT into two state-owned companies.

Telkom SA is the new name for South Africa's telecommunications system, and the postal system will be known as Sapos.

Mr de Villiers said owing to the diverse activities of telecommunications and postal operations it was necessary to separate the two undertakings.

He said telecommunications were capital-intensive while postal services were labour-intensive. Dividing posts and telecommunications and by managing each according to its own particular needs and characteristics, would result in greater efficiency.

Mr de Villiers said draft legislation had been presented to Parliament to make provision for the department to be converted into two public companies. The state would own the companies.

"According to this proposed legislation the state cannot sell shares in the companies. There is thus no question of privatisation."

Mr de Villiers said boards of directors for the two companies would be appointed before the forming of the companies. One of the board members would be appointed managing director of the company concerned and would act as chairman of that company's management board.

He said before the companies were founded, regulations would be issued which made provision for the forming of a collective bargaining forum for each of the companies.

The company and the recognised staff associations and trade unions would have equal representation on the bargaining forum, Mr de Villiers said.

The forum would have an independent chairman. The management board of each company, with permission of the board of directors, could change conditions of service.

Salaries and wages, fringe benefits, allowances, leave and pension, could not, however, be changed without a process of collective bargaining.

Mr de Villiers gave the assurance that all staff benefits were protected in the draft legislation. Service conditions would not be less favourable than the present ones.

No staff member would be retrenched as a direct result of restructuring, he said.

Weekly Examines Carrier Rocket Program

*OW0509031090 Beijing BEIJING REVIEW in English
No. 36 3-9 Sep 90 pp 23-26*

[Article by Xu Jian: "Progress in Carrier Rocket Technology"]

[Excerpts] At 9:40 a.m., Beijing daylight savings time, on July 16, the Long March-2 cluster carrier, a newly developed high-capacity booster rocket, was successfully launched at the Xichang Launch Site in southwest China. The successful launch added new dimension to China's carrier rocket series and was an indicator of China's ability to launch heavy satellites. It marked a new stage for China's carrier rocket technology.

Long March Series

Before that successful launch, China's astronautics industry had already developed the rocket series of Long March-1, Long March-2, Long March-3 and Long March-4. Since April 1970, with the Long March serial rockets, China has successfully launched 27 communications and retrievable remote sensing satellites.

The Long March-1 rocket was the first to send the "Dong-fang-hong-1" satellite into space, the prelude to China's activities in outer space. The rocket has a length of 29.45 metres, a maximum diameter of 2.25 metres, a take-off weight of 81.6 tons and a useful load of 300 kg. The rocket has successfully launched two satellites.

In 1975, the Long March-2 rocket was formally put into service. A two-stage liquid rocket, the Long March-2 rocket has a length of 35 metres, a maximum diameter of 3.35 metres and a weight of 191 tons. It is capable of sending a 2.5-ton payload into near-earth orbit 200-400 km high. The Long March-2 used a tri-axial, stable square and digital computer and a rocking engine to provide thrust vector control for the first time. The Long March-2 has successfully launched 11 retrievable remote sensing satellites since 1975.

The Long March-3 is a three-stage rocket, the first and second stage boosters of which were improved on the basis of China's long-distance carrier rocket. Its third stage booster adopted the crucial rocket technology of hydro-oxygen and hydro-hydrogen, high-energy, low-temperature fuel rocket now being used by only a few countries. Chinese scientists mastered the technique by which a three-stage rocket can be started twice under zero gravity of space and a high vacuum. This marked a breakthrough in overcoming the orbit control difficulties previously faced when launching earth stationary orbit satellite at a place far removed from the equator. The Long March-3 rocket has a length of 43.25 metres, a maximum diameter of 3.35 metres, a take-off weight of 202 tons and a take-off thrust of 280 tons. Capable of sending a 1.4-ton payload into earth stationary orbit 36,000 km high over the equator, the Long March-3 has proven to be of good quality and high reliability. So far, China has launched seven such rockets. Except for the first, because of a failure in the secondary ignition of the

three-stage rocket engine which prevented the satellite from entering into transfer orbit, the remaining six launches were all successful. Overall, the launch rate has been 93 percent successful, a rate better than that found in carrier rockets abroad.

In September 1989, the Long March-4 rocket successfully launched China's first experimental meteorological satellite—Fengyun-1—at the Taiyuan Satellite Launch Center. The Long March-4 is a multipurpose, constant-temperature fuel three-stage rocket. With a total length of 41.9 metres, a maximum diameter of 3.35 metres and a take-off thrust of 300 tons, it is capable of placing a 1.5-ton payload into a 900-km-high orbit synchronous with the sun and a 3.8-ton payload into a round orbit 400 km high at a dip angle of 70 degree. The Long March-4 rocket uses relatively advanced technology for the power system, guidance and stabilization and surveying system. It is suitable for different satellite launch sites and launching different types of applied satellites and scientific and technological experimental satellites into different orbits.

The successful development of the above rockets placed China among the ranks of those countries with the ability to launch satellites into near-earth orbit and simultaneous synchronous sun and earth static orbit.

Cluster Rocket

The development of Long March-2 cluster rocket was approved by the State Council Work Conference chaired by Premier Li Peng on December 14, 1988. It was designed on the basis of Long March-2 by lengthening the first stage by 4.6 metres and the second stage by 5.2 metres. The first stage rocket had four boosters 2.25 metres in diameter and 15 metres in height. Both the upper stage and the payload are installed in a cowl 4.2 metres in diameter and 10.5 metres in height. The rocket has a length of 51 metres, a take-off weight of 464 tons and a take-off thrust of 600 tons. It is capable of taking an 8.8-ton payload into near-earth orbit 200-400 km high.

Similar to using an aircraft to launch a satellite, the Long March-2 cluster rocket first pushes the upper stage rocket and satellite to the near-earth orbit where it then ignites the upper stage rocket and, in a "relay," sends the 2.5-3.2-ton heavy communications satellite to the geosynchronous transfer orbit 36,000 km high. If a mixture of hydrogen and oxygen is used for the upper stage, it is capable of pushing a 4.5-ton satellite to the geosynchronous transfer orbit. The July 16 launch was a test conducted according to the requirements specified in a contract signed between the China Great Wall Industry Corp. and the Hughes Aircraft Co. of the United States for the launching of two large Australian communications satellites in 1991 and 1992. During the test, a simulation satellite of Aussat-B and a Pakistan scientific experimental satellite with a total mass of 7.4 tons were sent into the space.

The successful launch marked a major progress in China's carrier rocket technology and launch facilities. Improved as it was on the basis of Long March-2, the rocket used new technology in the five major system areas—power, remote survey, outer survey, structure and control. It solved a series of major technological problems in parallel structural mechanism, reduced propellant residue, and improved engine function, heavy satellite cowlings, heavy ground launch pad and a full rocket vibration tower. New structures, new materials and new technology were also developed, thereby opening up an effective way for China to develop still more powerful carrier rockets and to launch heavy space crafts cheaper and more quickly. [Passage omitted]

After the successful launch of the Asia-1 satellite, Liu Jiyuan, vice-minister of aeronautics and astronautics industry, said that China's launch service is intended as a useful supplement to the international launch market and that it won't become a rival to European and American rocket manufacturing companies, much less become a threat to them. He noted that China's carrier rocket production capacity and launch facilities are limited and that the purpose of the service is to provide a greater range of options for customers.

Why the Low Price

Some foreigners worry that China's launch service for foreign countries will be at the expense of other countries by forcing down prices. It is true that the prices and terms for launch services which were agreed upon between the China Great Wall Industry Corp. and various clients are a better deal than offered elsewhere. This is because China's carrier rockets are practical and reliable, have a high rate of success and use all domestically made materials and components. In addition, China's labour cost is low. Of course, the China Great Wall Industry Corp.'s quoted price won't subsidize the corporation. After the successful launch of the Long March-2 cluster rocket, Chen Shouchun, vice-president of the China Great Wall Industry Corp., said that his company assumed sole financial responsibility for profits and losses and that the company's quoted price was based on cost plus reasonable profits. "All the costs for the manufacture of the Long March-2 cluster rocket," he said, "came from the commercial loans provided by the Scientific and Technological Service Co. under the People's Bank of China; we received neither loans nor subsidies from the government." Since the rocket was developed and assembled in only 18 months, compared with three to four years in Western countries, there was also a substantial reduction in costs. Chen added that the price for the launch of a communications satellite is generally quoted to include the entry of the satellite into the geosynchronous transfer orbit. The Long March-2 cluster rocket, however, was sent into orbit in two stages: first, sending the satellite together with the perigee rocket into a near-earth orbit; second, using the foreign perigee rocket to send the satellite from near-earth orbit into the synchronous transfer orbit. The former's quoted price

originates with the Great Wall Industry Corp., the latter's quoted price with foreign company. Together, the two add up to an overall price. Some foreign concerns mistook China's quoted price as the total for the entire launch service, making it appear that the price of the Great Wall Industry Corp. was dramatically low.

In short, China's guidelines and policies on launch services for foreign countries are consistent, open and aboveboard. These policies not only benefit China, but also facilitate the advancement of world space technology.

Second Weather Satellite Successfully Launched 3 Sep

*OW0309124990 Beijing Domestic Service in Mandarin
0930 GMT 3 Sep 90*

[By reporter Su Kuosan, from the "National Hookup" program]

[Text] China successfully launched the second Fengyun No. 1 experimental weather satellite at the Taiyuan Satellite Launching Center at 0953 summer time [0053 GMT] on 3 September. The satellite has entered the solar synchronous orbit.

After a Long March IV carrier rocket accurately delivered the satellite to the predetermined orbit, the Xian Satellite Tracking and Controlling Center has been in control of the satellite. At the present, the satellite is functioning normally.

At 1314 [0414 GMT], the Urumqi Satellite Ground Station received the first very-high resolution and visible-radiation cloud picture. Both clouds and the earth surface appear clearly on the picture; rich layers of clouds are shown. The Xian Satellite Tracking and Controlling Center and the State Meteorological Administration's Satellite Meteorological Center are monitoring the satellite on the orbit according to the schedule.

The main tasks of the satellite are to obtain domestic and foreign meteorological cloud pictures, ocean exploration data, and atmospheric physical data; to raise China's capabilities of atmospheric exploration and weather forecasting to serve better the national economy and defense construction; and, at the same time, to transmit meteorological data to meteorological satellite ground stations all over the world.

Two balloon satellites set up by the Chinese Academy of Sciences for atmospheric observation also were launched at the same time, and they have entered the predetermined orbit.

State Councillor Song Jian watched a live relay of the launching at the Beijing Command Center.

Beijing Economic Radio Station To Begin Broadcast*SK0709044990 Beijing BEIJING RIBAO in Chinese
22 Sep 90 p 1*

[Excerpts] To exploit the capital's advantages in information, in invigorating the socialist commodity economy, and in better serving the audience of various circles, the economic station of the Beijing People's Broadcasting Station will begin broadcasting on 23 September.

The economic station of the Beijing People's Broadcasting Station has conducted a large-scale reform in the setup, contents, and the form of programs. Applying propaganda to service and education to recreation, this station is a new popular station embracing the functions of information, service, and recreation. The opening of this station will be conducive to invigorating the economy, providing information, promoting production, enlivening the market, and enriching the people's cultural livelihood.

The programs of this station will be arranged based on the analysis and study of the social state, cultural setup, and consumption trend of the capital. Transmission time will total 11 hours every day. [passage omitted]

The frequency of this station is medium wave 1026 khz.

Television Station Cooperation Group Achieves Good Results*OW0909055990 Beijing XINHUA Domestic Service
in Chinese 0020 GMT 8 Sep 90*

[By reporters Zhang Jianmin [1728 0256 3046] and Hui Jinyi]

[Text] Taiyuan, 8 Sep (XINHUA)—“One station works for 100 stations, while 100 stations help one station.”

Cooperation among television stations in our country's cities achieved significant results during the past 10 years.

Most urban television stations in our country were established in the early 1980's to meet the needs of political, economic, and cultural development in cities. A Cooperation Association of Urban Television Stations was founded in 1980 under the sponsorship of seven city television stations to solve the problem of sources of programs. Now, the association has more than 170 members. Statistics show that from 1985 to 1990, the member stations provided programs totaling 1,783 hours for exchange among themselves. These included 1,640 TV plays, 1,169 program on special topics, 305 short TV shows, and 822 programs on literature and art. The number of programs exchanged will be even greater if the small-scale exchanges between some television stations are taken into account.

Since 1985, the cooperation association cooperated in a planned and systematic way to present eight serial programs on special topics; namely, “A Collection of Essential Urban Activities,” “Notable Cuisine of Various Localities,” “Biographies of Capable People,” “A Glimpse of Famous Cities,” “Short Programs on Law Education,” “Short Programs on Spiritual Civilization,” “Scenes of 100 Cities,” and “Everyone Says That My Native Place Is Good.” These special programs, numbering 416 in total, have greatly enriched the content of television.

Moreover, the cooperation association conducted vigorous campaigns to select outstanding programs with the objective of improving the quality of television programs. Since 1985, it launched four such campaigns and selected a number of good programs that can be used as teaching materials for patriotic education. In addition, the cooperation association conducted activities such as theoretical studies and exchange of experience and information, which resulted in the further thriving of urban television work.

INTER-ASIAN AFFAIRS

Japan Proposes Plan to Boost Asian Telecommunications

OW1109055190 Tokyo KYODO in English 0443
GMT 11 Sep 90

[Text] Seoul, Sept. 11 KYODO—Japan's Posts and Telecommunications Minister Takashi Fukaya on Tuesday proposed a grand project to bolster and upgrade the telecommunications networks in the Asian region, Japanese government officials said.

Fukaya's idea was presented at a meeting with South Korean Communications Minister Yi U-chae, the officials said.

As Yi reacted favorably to the proposal, the two sides agreed to cooperate to promote the initiative, they said.

Fukaya's plan includes the establishment of a pan-Asian Integrated Services Digital Network (ISDN), to augment mobile telecommunications such as cellular phones in the region, the construction of telecommunications complexes utilizing satellites, the expansion of international value added networks, and laying of undersea optical fiber cables.

For the first step toward boosting the Asian telecommunications capacity, Japan will sponsor several international conferences and seminars on telecommunications technology in the next 12 months, the officials said.

South Korea has expressed a strong interest in participating in these meetings.

Officials of the telecommunications ministries of both countries are holding working-level meetings in Seoul to discuss bilateral cooperation in the field in light of the next annual meeting of the Asia-Pacific Economic Cooperation (APEC) Forum to be held in the South Korean capital next year.

AUSTRALIA

Government Telecommunications Monopoly To End

BK1009091990 Hong Kong AFP in English 0845 GMT
10 Sep 90

[Text] Canberra, Sept 10 (AFP)—The government intends to end its monopoly in telecommunications and allow private competition against a giant government-owned merger, Prime Minister Bob Hawke said Monday.

Mr. Hawke told reporters that his Labor government had decided to merge its domestic network, TELECOM, with its international network, OTC.

The government would sell the debt-ridden satellite carrier AUSSAT to help form the basis for private

competition against the TELECOM/OTC giant, the prime minister said after a lengthy cabinet debate.

The decision, like that to sell equity in the government-owned Qantas and Australian Airlines, must be approved by a special labor party conference on September 24.

Official party policy opposes privatisation of key assets.

In a historic turnaround for Labor, Treasurer Paul Keating recently rammed through a plan to partially privatise the Commonwealth Bank.

The government announced the partial sale of the airlines on Thursday, saying at the same time that it would introduce "effective competition" into the telecommunications industry but maintain 100 per cent ownership of TELECOM.

Mr. Hawke said the changes in telecommunications would result in consumers paying less for long-distance domestic calls and a ceiling being imposed on many local call prices to protect consumers.

"The decision we have taken now will introduce to Australia an effectively competitive system which will ensure the maximum acceleration of implementation of technology in a way that will be of benefit to consumers."

Mr. Hawke said OTC would form the basis of TELECOM's international arm and that both TELECOM and its unnamed rival would also compete overseas.

Asked whether AUSSAT would form the basis of TELECOM's competitor, Mr. Hawke said: "Yes."

Mr. Hawke said the new competitor "will ultimately be Australian owned."

At a joint news conference with Mr. Hawke, Communications Minister Kim Beazley declined to say what proportion of foreign equity would be allowed in telecom's rival.

The plan to merge TELECOM and OTC was devised by Mr. Beazley, who was believed to have proposed that a private and predominantly foreign-owned company be invited into direct competition with TELECOM/OTC—which he dubbed MEGACOM.

Analysts said the TELECOM/OTC giant would be worth more than 20 billion Australian dollars (16.4 billion U.S.).

Labor sources said that opposition to privatisation of any government assets remained intense, but there was a growing realisation that rejection of the government plan would severely embarrass the Hawke government.

CAMBODIA

Cambodian Radio, TV Chief Interviewed on Operations*BK0809070090 Hanoi Domestic Service in Vietnamese 0015 GMT 7 Sep 90*

[Interview with Cambodian Radio and Television Department Chief (Yon Yan) by unidentified station correspondent; (Yon Yan) remarks in Cambodian fading into Vietnamese translation; date, place not given—recorded]

[Summary] During his recent visit to the Voice of Vietnam Radio, Comrade (Yon Yan), chief of the Cambodian Radio and Television Department, granted an interview to our station correspondent. Asked to discuss some recent changes in the Cambodian People's Voice station to the Voice of Vietnam Radio listeners, he said:

"Our Cambodian People's Voice station has been operating for 12 years now. Our station has made encouraging progress during this time. It now holds an important position in propagating the lines and policies of the party as well as the national construction and defense activities of all the Cambodian people and troops." We think that the quality of our broadcasts and propaganda has considerably improved. Our listeners have appreciated this improvement and said that the contents of the broadcasts are profound, timely, and suitable to the real situation of the people's work and production. We have also received many requests for airing contemporary and folk songs in order to enrich broadcast programs. "This is a source of encouragement to us. Particularly so because, together with broadcasts in Khmer, we also broadcast programs in the five foreign languages of French, English, Thai, Lao and Vietnamese; each language twice daily." Foreign listeners have commended our station for reflecting the real situation in Cambodia. This is also a source of pride for us. "The Voice of America also often airs the news that is broadcast by our station." Along with improving broadcasts, we have also installed wired radios in various localities throughout the country to keep the people informed of the latest news.

Asked about the operation of Cambodian television, he said:

"Cambodian television has been operating for 7 years now. We are rebuilding its physical foundation because, during the time of genocide, the Pol Pot clique totally destroyed it. We are now broadcasting three times daily." Even though we have achieved some progress over the recent past, we still have many difficulties in our radio and television broadcasts such as limited time, outdated facilities and techniques, and poor professional knowledge among our personnel.

Dealing with the cooperation between Vietnam and Cambodia in the field of radio and television, he said:

"We have cooperated with each other continuously since the signing of agreements between our two stations. We have exchanged with each other timely broadcast materials and data and have made the people in each other's country well aware of their real lives. Particularly, we have realized that through such cooperation, the Vietnamese people understand all the more clearly the practical life of the Cambodian people. At the same time, through the Voice of Vietnam, the world public is also more aware of the situation in Cambodia. Our just struggle is to prevent the Pol Pot regime from returning to Cambodia. Another important issue is that we should accelerate the exchange of information, professional experiences, and correspondents between our two stations on the occasion of anniversaries. We have realized that our Vietnamese friends have helped us a great deal in training specialist cadres and developing our station every day. In the future, such cooperation between Cambodia and Vietnam will be strengthened and consolidated. We hope that the Voice of Vietnam will continue to assist us even more so that our Cambodian People's Voice will remain worthy of being the important propaganda agency of our Cambodia."

JAPAN

NTT Announces Experimental Broadband ISDN System*OW1109113690 Tokyo KYODO in English 0945 GMT 11 Sep 90*

[Text] Tokyo, Sept. 11 KYODO—Nippon Telegraph and Telephone [NTT] Corp. unveiled Tuesday an experimental broadband integrated services digital network (B-ISDN) that will become the telecommunications giant's infrastructure of the future.

The B-ISDN system, developed at NTT's Musashino research center, is a high-speed network offering a user/network interface speed of either 156 or 620 megabits per second, allowing transmission of image signals in addition to voice and data, NTT officials said.

The experimental system consists of an asynchronous transfer mode (ATM) switching system that accommodates 256 lines, each operating at 156 megabits per second. The ATM ring is also a high-speed local area network (LAN). Existing LANs transmit data only, while the multimedia ATM ring can also transmit voice and video.

NTT's ATM overcomes the technical limitations of existing circuit switched and packet switched systems, dividing information into fixed-length packets known as "cells" and transferring them into the network.

The system will make multimedia communications such as voice, image, personal computer, or mainframe communications a reality in the near future, officials said.

High definition television signals can also be transmitted at high speed using this network communications systems, they added.

The telecommunications giant will select a manufacturer to jointly develop a commercially viable system, in late November and plans to start part of the B-ISDN system in fiscal 1995, officials said.

NTT's recently developed B-ISDN system comes at a time when Europe and the United States are racing to construct their own integrated experimental networks.

Europe is developing its own system under the race cooperative project. The U.S. is headed by Bellcore, a cooperative organization within the telecommunications industry, which is working on a system called "Sunshine."

Broadcast Satellite 'Limping Along at Three-Quarters Power'

OW3108151090 Tokyo KYODO in English 1454 GMT 31 Aug 90

[Text] Tokyo, Aug. 31 KYODO—The newly launched Japanese broadcasting satellite "Yuri-3A," apparently hampered by a faulty solar power panel, is limping along at three-quarters power, the National Space Development Agency said Friday.

Agency officials suspect that an electrical circuit on one of the panels developed by General Electric Co. of the United States may be impaired, resulting in a loss of power that may make it difficult for the satellite to be fully functional.

The satellite, which was launched Tuesday from the agency's Tanegashima Space Center, was jointly developed by Japan's NEC Corp. and General Electric and was to broadcast three channels beginning in November from a geostationary orbit 36,000 kilometers above the equator over Indonesia.

Officials said the loss of power from a planned 1.4 kilowatts to 1.1 kilowatts may make it difficult to broadcast all three channels for an extended period of time.

They are considering how the loss of power will affect satellite broadcasts on two channels for Japan Broadcasting Corp. (NHK) and a pay-television channel, Japan Satellite Broadcasting (JSB), scheduled to begin service next April.

A digital radio service, also scheduled to initiate service in April with a sound quality approaching that of compact discs, is also expected to be affected by the power loss.

Agency officials said one kilowatt of energy was enough to power three channels for a limited length of time, but added that the original expected useful life of seven years may now be impossible.

The satellite was launched to replace the aging Yuri-2B which has been beaming signals for NHK's two channels since 1986 but which is expected to end its useful life early next year.

KDD To Start Video Conference Service With UK

OW0509152590 Tokyo KYODO in English 1210 GMT 5 Sep 90

[Text] Tokyo, Sept. 5 KYODO—KDD (Kokusai Den-shin Denwa) said Wednesday it will start an international video conference service with Mercury Communications Ltd. of Britain from Thursday.

Japan's international telecommunications giant said the new service would bring the convenience of audio-visual communications to customers in both countries.

KDD already has such a service between Japan and Britain in cooperation with British Telecom.

Japanese participants will pay 154,000 yen per hour plus a 40,000 yen conference room charge if KDD's own video conference room is used.

The charges on the British side are similar, the company said.

SOUTH KOREA

Daewoo To Produce Satellite Receivers for Japan

SK0109021690 Seoul THE KOREA TIMES in English 1 Sep 90 p 9

[Text] Daewoo Electronics announced the beginning of satellite broadcast receiver production from this month in technical cooperation with the Japanese company NEC [Nippon Electronics Cooperation].

The production capacity is set at 400,000 units per year, all of which will be exported to Japan under an OEM (original equipment manufacturing) contract with NEC.

Daewoo's move is timed with the government plans to launch a broadcast satellite in 1993 and develop HDTV (high definition TV).

The company said it will speed up further technology developments and production facilities expansion to meet future increases in demand for satellite broadcast receivers.

Satellite Technology Research Center Opened

SK0109023690 Seoul THE KOREA TIMES in English 1 Sep 90 p 3

[Text] Taejon—The Satellite Technology Research Center opened yesterday on the Korea Advanced Institute of Science Technology (KAIST) campus in Taedok Science Town near here.

The institute, headed by ex-communications minister Choe Sun-tal, will manufacture the Korea's first experimental satellite dubbed KIT-SAT by 1993. The satellite will be launched on a rocket made by a foreign country, possibly Ariane Rocket of France.

A total of 7.5 billion won (\$10.7 million) will be spent for the launching of the satellite which will weigh about 50 kilograms.

Once placed in orbit, the satellite will conduct digital telecommunications experiment, observe high energy waves from planets beyond the solar system and survey resources on the Korean peninsula using a CCD [expansion unknown] camera.

The institute will be staffed by 52 scientists from KAIST, seven universities, three research institutes and six companies.

THAILAND

Communications Minister Reports Help Sought by Laos

BK1109104490 Bangkok Domestic Service in Thai 1200 GMT 10 Sep 90

[Text] Communications Minister Montri Phongphanit today held a discussion with LPDR Ambassador Bunkeut Sangsomsak. The minister reported to newsmen after the meeting that Laos sought cooperation from Thailand in several areas. First they exchanged views on the construction of the Thai-Lao bridges over the Mekong river in Nakhon Phanom and Mukdahan provinces. The designs of the two projects are being worked out at present.

The communications minister and the Lao ambassador also discussed cooperation in communications. The cabinet has approved the sale of a cross-bar telephone

system to Laos at cheap price. The Telephone Organization is now preparing for the supply of equipment and making a price estimate. At the initial stage, Thailand would let Laos borrow the existing equipment we have on a temporary basis.

The communications minister said that Laos complained that the fees charged by Thailand for transit of goods from Laos to third countries are too high. Montri said that this problem will be studied. He has instructed officials to check if the transport fee is really too excessive and, if so, to make it fair for Laos. Thailand will also help Laos in training of Lao officials in air traffic control. He said that, once the bridges linking Thailand and Laos are completed, they will serve as economic bridges and will help the two countries solve the problem of transportation and communications.

VIETNAM

Microwave Systems Link Hanoi, 14 Northern Provinces

BK0809154790 Hanoi VNA in English 1442 GMT 8 Sep 90

[Text] Hanoi VNA September 8—the Vietnam General Corporation for Telecommunication and Post has just put into operation three new systems of 30-channel digital microwave communication linking Hanoi with 14 Northern provinces.

These facilities have been installed with equipment manufactured by the Amalgamated Wireless (Australasia) of Australia.

In the past eight months of the year, the Viha Bicycle enterprise in Hanoi turned out 9,000 bicycles nearly 1,500 of which were exported to Bulgaria.

The enterprise plans to produce 3,00 [figure as received] more bicycles in the remaining period of this year, half of them for export, so as to achieve a record export volume of 25 percent of its total production in a year.

INTRABLOC AFFAIRS

East Europe Said 20-25 Years Behind West

90AN0339 Brussels EUROPE in English 15 Jun 90 p 8

[Report: "Telecommunications/Central and East Europe: European Commission Proposes a Series of Actions To Prevent the Weakness of the Sector From Hindering Economic Development in These Regions of Europe"]

[Text] Brussels, 14 June (EU)—In addition to the two communications on cooperation in the area of science and technology, the first with third countries in general and the second with the countries of Central and Eastern Europe in particular, the European Commission has adopted a communication on cooperation with these same countries in the specific area of telecommunications. The Commission notes that in the particularly important telecommunications sector, the weakness of Eastern and Central Europe, qualitatively as well as with regard to level of distribution, could considerably hinder efforts being made by these countries to achieve the change to a market economy.

According to ITU sources, telephone use in these countries was as follows in 1987:

Country	Principal Lines (in millions)	Population (in millions)	Number of Lines per 100 Inhabitants
Bulgaria (estimate 1986)	1.5	9	17
Czechoslovakia	2	15.6	13
GDR	1.7	16.6	10
Hungary	0.8	10.6	7
Poland	2.8	37.9	7
Romania (estimate 86)	1.9	22.9	8
Yugoslavia (estimate 86)	2.7	23.4	11
USSR (estimate 86)	29.5	283.6	10
EC figures	122.7	330	37
EFTA	16.3	32	51

In other words, Central and Eastern European countries are 20-25 years behind Western Europe. The delay is technological as well as related to telecom income levels, which are, for example, ECU 1,015 million in Czechoslovakia, ECU 193 million in Poland, and ECU 239 million in Hungary, but ECU 69,387 million in the EEC, and ECU 11,122 million in EFTA.

The most striking problem is chronic underinvestment in the telecom sector in Eastern and Central Europe. Waiting lists are increasingly longer: 12 years in Hungary

and 13 years in Poland, for instance. Telecommunications, however, is essential for successful trade, the Commission recalls.

At present, certain countries have already formulated investment and modernization plans, such as Hungary (ECU 5.3 billion for the creation of 27 lines/100 inhabitants in the year 2000) and Poland (ECU 13 billion to reach 13 lines/100 inhabitants); others are in the process of formulating plans. All have already been or will be subject to solicitations by suppliers. The Commission would like to warn them about the risk inherent to incoherent purchasing policies and that technical options are determined by trade possibilities. Major stakes exist, in particular, in regard to technical norms, which are also a crucial part of Community internal market policy, the Commission recalls.

The Commission proposes in its communication a series of actions whose principles can be summarized as follows:

1. Immediate assistance in the area of sources of information, services and methods of access to information in order to "actively" encourage their exchange;
2. Greater integration of these countries' telecom networks and services into the trans-European telecom system. The Commission suggests opening to these countries the TEDIS II programme and extending trans-European telecom services to them in areas such as health, transport, home-study courses, etc.;
3. The promotion of trade and technology transfer through the establishment in these countries of "Europe Houses" which would encourage familiarity with the EC's experience in these areas;
4. Study of programmes and projects that are potentially eligible for financial aid from the EC and the Group of 24.

CZECHOSLOVAKIA

Director Urges Immediate Debate on Radio, TV Bills

LD0609111790 Prague Domestic Service in Czech 0900 GMT 6 Sep 90

[Text] Frantisek Pavlicek, central director of Czechoslovak Radio, has submitted to constitutional and government officials of Czechoslovakia and the Czech Republic a statement concerning the bills on radios and radio and television broadcasting.

His statement accompanies the draft bills by which Czech Radio is being established and Czechoslovak Radio is being newly defined. He asks for them to be submitted as soon as possible to the Federal Assembly for immediate discussion. Procrastination by organs preparing the new bills are, in his opinion, unjustified and cause social, moral and material damage, he says. By

passing this bill the newly established Czech Radio will be a radio station serving as the state mass medium of the Czech Republic, Czechoslovakia, and abroad. It should inform citizens about aims, platforms, and measures of the Czech National Council, the Czech Government and federal organs, and it should draw attention to facts, phenomena, and trends that are at variance with them. As an above-party mass medium Czech Radio will be independent.

Czechoslovak Radio will then be an above-party and, in the framework of its mission, independent state mass medium with a statewide operation. It should also ensure external broadcasting and fulfill other tasks of a program and commercial nature.

GERMAN DEMOCRATIC REPUBLIC

Radio Berlin International to Cease Transmission

LD0609184690 East Berlin ADN International Service in German 1712 GMT 6 Sep 90

[Text] Berlin (ADN)—The GDR's external broadcasting station, Radio Berlin International [RBI], will cease broadcasting by the end of the year at the latest. As Director General Klaus Fischer explained to ADN today, the disbandment of the radio station, which has a long tradition, must take place in accordance with supplement I to the German-German unification treaty. In this it is laid down that after accession to the Federal Republic, federal law will be valid for the former territory of the GDR, and thus the federal radio law also. Fischer said that this law rules out the continued existence of RBI alongside the Federal German external broadcasters, Deutschlandfunk and Deutsche Welle in Cologne.

According to the director general the exact date for the ending of RBI broadcasts has not yet been set. It can be assumed that a decision on this and on the future of its 215 employees will come from the Federal Interior Ministry within the next few days. It has already been indicated from Cologne that even Deutsche Welle places value on employing RBI people. The medium and short-wave frequencies used by RBI hitherto will be taken over by Deutschlandfunk and Deutsche Welle.

HUNGARY

TV To Assume Public Service, Commercial Character

LD0509091190 Budapest Domestic Service in Hungarian 2000 GMT 4 Sep 90

[Excerpts] The television's leaders, who took office 30 days ago, spoke to the press today about their ideas and plans. Gabor Kereszti reports.

[Kereszti] [Passage omitted] The wording of the text of the first variant of the bill on radio and television has commenced. This will be submitted to the Justice Ministry at the end of September-beginning of October, and will probably be put before the parliament in January. What the television service will be like in the future is still undecided. According to the president [Elemer Hankiss], a combination of something between a public service and commercial television should be realized. He also said it is not yet certain how the two channels will operate in the future, in competition, independently from each other, or coordinated with each other, in parallel. Elemer Hankiss said he would definitely not like to separate the two channels on a political divide. [passage omitted]

Several people probed into the question of the situation which has developed around the Newsreel program. Elemer Hankiss said this was also a part of the competition, but neither did he deny that it had been internal conflicts within the staff that had led to the break.

ROMANIA

Protocol on Communications With Moldavia SSR

AU0709201390 Bucharest ROMPRES in English 1902 GMT 7 Sep 90

[Text] Bucharest, ROMPRES, 7/9/1990—A protocol was signed in Bucharest between the Romanian Ministry of Communications and the Ministry of Information, Data Processing and Telecommunications of the Socialist Republic of Moldavia. The protocol was signed by Minister Andrei Chirica for Romania and by Minister Timofei Andros for the SSR of Moldavia. The document stipulates among other things the semi automation of the telephonic ways through adapters connected directly in the telephone exchanges in Kishinev and Bucharest or Iasi, direct telegraphic connections between these cities, the broadcasting of the Romanian national program through the radio relay in Iasi starting the fourth quarter of this year, improved post services and press diffusion between the two parties, exchanges of experts.

ARGENTINA

DYN, REUTERS Sign Cooperation Agreement

PY0409165590 Buenos Aires DYN in Spanish
0320 GMT 2 Sep 90

[Excerpt] Buenos Aires, 1 Sep (DYN) — Today DIARIOS Y NOTICIAS (DYN) and REUTERS announced a technical and commercial cooperation agreement for the joint distribution of international and national news reports in Spanish within the country and abroad in high speed via satellite.

The news services of the two journalistic organizations will be received by consumers at 120 characters per minute (1,200 BPS [bauds per second]) through an integrated network operated by REUTERS, which will use compatible equipment and technology.

The agreement, which will be implemented gradually and must be completed within the next few weeks, was announced by Humberto Perez, DYN's president, and by Enrique Jara, REUTERS director for Latin America. [passage omitted]

BRAZIL

Satellite Launch Contract Signed With French Company

PY0409023790 Brasilia Domestic Service in Portuguese
2200 GMT 3 Sep 90

[Text] Embratel [Brazilian Telecommunications Company] and a French company signed a contract in Rio de Janeiro today arranging the supply of a rocket to launch two Brazilian second-generation satellites. The \$96-million contract was signed by Embratel President Francisco Albuquerque and (?Charles Bivot), chairman of the French company's executive board.

An Ariane-4 rocket will launch the Brasilsat B-1 and B-2 satellites from the Ariane space base in Kourou, French Guiana. The Brasilsat B-1 will be launched in April 1994 and the B-2 in October 1994. They will replace two communications satellites currently in orbit.

COLOMBIA

Changes in Telecommunication Services

PA0209174990 Bogota EL TIEMPO in Spanish
22 Aug 90 p 3A

[Report by Ana Lucia Duque Salazar]

[Text] The decentralization of telecommunications services, linked to the dismantling of the state monopoly implemented through Telecom [National Enterprise for Telecommunications], constitutes the major change approved by the government in its restructuring of the communications sector. This shift is contained in four

decrees disclosed yesterday by Communications Minister Alberto Casas Santamaria. The decrees give general rules on services to be rendered, leave room for national and private companies, reform the Communications Ministry's internal structure, adjust the National Institute of Radio and Television [Inravisión] plant, and dictate guidelines to strengthen film production.

According to Casas, the goal is to issue norms in line with efforts to modernize institutions so that they can respond to the needs of the citizens and lead to a fairer, more prosperous society. Hence, the decentralization and competitiveness of public services are considered in the specific case of communications. As a result, the municipalities will have greater autonomy, and, at the same time, will be to increase their sources of revenue.

However, the reforms do not cover television, as per the pact Former Minister Enrique Danies Rincones made with Congress when he was granted extraordinary powers to modify this sector. Minister Casas stated that he will soon submit a bill outlining the government stance on how to handle television.

Matters related to radio broadcasting are not included in the decrees, although this topic was mentioned in a decree drafted, but left unsigned by the previous administration, but which was used by the Gaviria Trujillo administration. That decree was going to establish two systems to open and operate radio stations—direct bidding for towns with small populations and open bidding for all the rest. The idea was to end the illegal status of over 600 radio stations throughout the country.

Casas explained that this point was omitted because the persons involved in the reforms could not reach an agreement. He added that two congressmen included in the advisory commission on this matter had submitted opposing views. He also felt that issuing decrees and guidelines are not enough to end the clandestine status of some radio stations, but instead a more detailed analysis of the situation in each region is necessary, and the natural forum for this is Congress.

No reforms have been introduced for the postal system, though the state monopoly on packages weighing up to two kilos is expected to be dismantled as well. This topic has been the subject of sharp controversies between the Postal Administration (Adpostal) and the owners of private fast messenger services.

Casas announced that Congress will prepare new regulations in the matter.

The first decree, numbered 1900 and dated 19 August, is the so-called Telecommunications Statute, which guarantees freedom and access to different services. It also establishes pluralism of information as a basic right of the population and it contemplates the right to rectification [derecho de retificación].

The Telecommunications Statute differentiates between the network and the services provided to prevent them

from conflicting and it establishes the possibility of having a duplication of networks in some cases. Similarly, it establishes sanctions in the event its dispositions are not respected.

According to decree No. 1900, telecommunication services are divided into six categories: Basic (telephone and telegraph); broadcast (radio and television); radio telegraphy (telex, facsimile, etc.); mode of transmission (electronic newspapers, electronic mail, etc.); emergency services (radio electric services for assisting and protecting human life, as well as aid devices for meteorology and air and maritime navigation); and special (experimental ham operators involved in industrial, technical, and scientific research).

In all the aforementioned areas, one can compete with Telecom. However, different people and agencies should carry out this competition. According to Casas, the government does not seek to eliminate the state's communication enterprise, it only seeks to stimulate and improve the rendering of services.

Concerning the rendering of the various international services, Colombian agencies will be able to compete with Telecom. The municipalities, by uniting, may form national agencies to compete with Telecom. Private citizens are not able to compete in this area.

The international telephone services provided by Telecom are thought to be of good quality. However, there are complaints about the rates, which many times are higher than those in other countries.

The government, national decentralized institutions, and partnerships between regional agencies or their decentralized institutions will be allowed to provide telephone communications between Colombian cities. Private citizens will also be allowed to provide this service once they are awarded a concession with the approval of the municipalities.

Private citizens will be allowed to compete with Telecom to render other services by obtaining licenses. For example, this means that the National Federation of Coffee Producers may find a network of data transmission other than Telecom's Coldapaq, which they have been trying to join for two years.

In addition, the television newscasts may use the microwave services that are provided by private citizens and not those provided by the government, which, according to directors of newscasts, cause problems because of the speed required to broadcast the news.

Decree No. 1900 includes a change in television newscasts. As of now, television newscasts will be able to directly receive news reports and information for public presentation via satellite, provided that they register with the Communications Ministry. The government

seeks to end the signal piracy conducted by some companies that sell news reports, because these companies will now be required to sign an agreement with the owner of the signal.

The concession-holders of subscription television services will also be able to directly receive the television signals destined for transmission to service subscribers.

Concerning the use of satellite dishes, the Telecommunications Statute establishes that the networks that are used to carry this signal cannot interfere with public space. The installation of satellite dishes should be approved by the corresponding municipality in keeping with local architecture and city planning regulations. This signal will not be commercialized.

CUBA

Future TV, Radio Marti Jamming Plans Announced

FL1009125990 Havana Radio Rebelde Network in Spanish 1055 GMT 10 Sep 90

[Report by Josefa Busi on "Haciendo Radio" program; passages within quotation marks recorded]

[Text] On 8 September, Army General Raul Castro, second secretary of the Communist Party of Cuba [PCC] and minister of the Revolutionary Armed Forces, awarded the Lazaro Pena Medal, First Class, to outstanding workers who helped reject the enemy's tele-aggressive broadcasts.

Other PCC leaders awarded the Labor Feat, Production and Defense Combatant, and Distinguished Workers in Defense Preparation Medals to more than 300 civilian and military comrades who were outstanding in this work. Diplomas were also given as a well-earned incentive for the work done in response to the enemy's tele-aggression to a collective of workers.

The remarks closing the ceremony were made by Carlos Aldana, member of the Secretariat of the PCC Central Committee. In his speech, the party leader gave a historic background of U.S. radio aggression against Cuba. Later, Aldana said that the illegal nature of this action was internationally acknowledged. He then stated Cuba's position.

[Aldana] "Imperialist reports and decisions do not change the fact that the last word on the anti-Cuban television station does not come from Washington; it comes from here in our territory. It is openly made on all airwaves and by our people, who are firm in their willingness to remain faithful, above all, to themselves, their history, traditions, ideology, and destiny."

In addition, Aldana also stressed the unanimous will of the engineers and experts to thwart the aggression and preserve the sovereignty of the fatherland and the circumstances under which they work to attain success.

[Aldana] "The merit of our technicians is that they very quickly determined the enemy's intentions and the calculations they made were so precise they almost coincided with those made by U.S. engineers. Our country had never before faced this kind of challenge. It was a matter of talent against talent with the Cuban engineers being the victors."

In regard to investments, Aldana said that the costs were minimal.

[Aldana] "Costs were always under discussion. The enemy speculated on sums of money and tons of oil but it never estimated to what point their sophisticated technology and numerous financial resources would be defeated by [words indistinct].

"In regard to investments, we estimated our costs in an approximate ratio of one to one thousand. For each \$1 million spent by the United States, we invested \$1,000. Much work was done recovering [words indistinct] equipment, others were designed for several purposes, and the costs for the project and salaries were minimal. Not a single comrade earned one centavo more for a certain project. Not one of them billed for an extra hour of work and not a single one of the monopolized an idea.

"From the first moments, (?the efforts) were conducted as a campaign. Now that we are familiar with all the parameters of the enemy's operations, we have decided to gradually shift to an automated regime, which makes maintenance, energy, and operation costs very significant. When these works are done, a dozen men will operate the entire system. Only two men will be responsible for maintenance and the energy costs will be no greater than the energy consumed by a home.

"[Words indistinct] three pesos a day of electricity will be enough to jam the enemy signal."

He also said that the anti-Cuban radio signal is 90 percent jammed and it will soon be jammed completely.

In conclusion, Aldana congratulated the civilian and military engineers, technicians, and workers who are involved in this effort. He also acknowledged the discreet, but valuable, help of the people of Havana, Pinar del Rio, and Matanzas.

He later said that our country receives signals from more than 100 radio stations throughout the world and Cuba has never and will never act against those stations that operate legally.

Aldana then congratulated all the award winners.

ECUADOR

Radio Sucre Closure Called 'Unconstitutional'

PA0909013790 Paris AFP in Spanish 2132 GMT
7 Sep 90

[Text] Quito, 7 Sep (AFP)—The Ecuadoran Parliament Secretariat reported on 7 September that Congress had condemned President Rodrigo Borja's decision to take off the air the Radio Sucre broadcasting chain belonging to opposition Deputy Vicente Arroba Ditto. Congress labelled this decision "unconstitutional and illegal."

The congressional resolution was adopted on 6 September with 31 of the 48 deputies present in favor, while the same number "demanded" immediate reopening of the aforementioned radio station.

On the evening 4 September, Radio Sucre was off the air. Thus the president fulfilled his promise to take the station off the air if Radio Sucre did not present evidence of alleged arms negotiations made by Arroba himself, who had stated: "The people are saying that a brother of the president is involved."

On 30 August, Borja announced on a radio and television network that he was giving Radio Sucre five days to prove its accusations. The president said if evidence was found: "I will present my resignation (as President of the Republic) to the Ecuadoran people."

Efforts on the part of broadcasting organizations could not make the president change his mind, while official spokesmen have insisted on the legality of the measure adopted, which is "irreversible."

PANAMA

Television Channel Assigned to Catholic Church Foundation

PA0309013790 Panama City EL PANAMA AMERICA
in Spanish 1 Sep 90 p 1

[Report by Carlos Vargas]

[Text] National Communications Director Edwin Cabrera announced yesterday that the frequency assigned to "Telemedios, Inc.," better known as Panavision Channel 5, had been cancelled. He added that the frequency has now been assigned to the PTV [expansion unknown] Foundation, headed by Panamanian Archbishop Monsignor Marcos Gregorio McGrath.

Cabrera said that a resolution explaining the reasons for the cancellation of Panavision Channel 5's frequency had been signed by the president and the government and justice minister.

The communications director stated that the frequency had now been assigned to the PTV Foundation on a three-month trial basis and that its definite assignment would be discussed after the trial period ends.

The executive branch's resolution states that the Telemedios, Inc. file does not include a copy of the required and duly authenticated title of ownership, a copy of

certification by the Public Registry, or a receipt from the National Treasury showing proper payments had been made.

INDIA

Role of Telecommunications in Economic Development

90WD0659 New Delhi PATRIOT in English
21 Jul 90 p 10

[Text] Telecommunications play a key role in the economic development of the country and more importantly help in removing growth disparities in a developing economy like ours by providing essential infrastructure to backward and remote areas. With a view, therefore, for building up a reliable and efficient telecom network in the country, Department of Telecommunications has been striving to mobilise resources, induct new technologies and upgrade the skill of the personnel engaged in these services.

Having realised the crucial role played by telecommunications both in rural and urban sectors, an ambitious plan has been drawn up for the eighth Plan period focusing on the expansion of services and modernisation of the network to meet future requirements of the enhanced services. In this very backdrop, the achievements of the Department of Telecommunications during the last six months have been impressive.

At present, the local switching capacity in the country is of the order of 5.26 million, with about 4.6 million working connections. During the last six months, 4.13 lakh lines have been added to the network as against 4.67 lakh lines during the entire period of 89-90. The break up is: 3.08 lakh lines of E-10B electronic type main exchanges; 46,850 lines of electro-mechanical type exchanges; 58,183 lines of small and medium electronic and electro-mechanical exchanges in rural and semi-urban areas.

National and international STD services are provided through TAXs located at various places in the country. The installed capacity is 1.7 lakh lines, out of which 28,000 lines have been added at 12 locations during the last 6 months.

Telex facilities provide the basic link for trade, commerce and industry. With a view to strengthening the telex service, 2,190 telex exchange lines have been added to the existing 50,560 lines with a clear objective of providing telex connections on demand. At 26 remote centres where setting up of full-fledged telex exchange is not justified, notional telex exchange have been commissioned.

Long distance transmission systems provide the connectivity between various telephone exchanges spread over the length and breadth of the country. With the objective of providing high grade speech and data circuits, digital microwave and optical fibre systems are progressively being inducted into the network with the ultimate goal of building up a national digital network interconnecting all metro cities, State capitals and district headquarters.

Besides the improvement in the quality of speech and data circuits, this would also result in optimisation of the resources as all the users with their diverse needs would be able to use the proposed network without going in for individual network.

The achievements during the last six months in fulfilling the objective set forth above are: 2,232 route kms of fibre optic system commissioned; 1,963 route kms of microwave radio links installed; 3,165 route kms of UHG system commissioned; 1,071 route kms of coaxial system put into service.

As a result, digital connectivity (which provides higher quality communication) has been achieved between Delhi, Bombay and Madras. In addition, five satellite earth stations have been installed to provide connectivity to remote areas. Three satellite earth stations are at Andaman Nicobar Islands and one each in Lakshadweep Island and at Temenlong in Manipur.

Also the emergency communication terminal (ECT) at Joshimath has been replaced by low cost terminal (LCT).

Out of 463 district headquarters in the country, so far 386 have been provided STD facilities. Out of 386, as many as 35 DHQs have been provided STD during the last six months.

Keeping in view the wide gap between the demand and availability of the telephone services in the urban areas, accessibility to telecom facilities has been given greater importance. It has been planned that at least one public telephone should be available on an average for every 50 persons in urban areas.

To meet this objective, additional four lakh public call offices (out of which one lakh with STD facilities) have been planned during eighth Plan period. In the last six months 1,508 public telephones in urban areas and 23 telecom centres with telephone, telex and FAX services have been provided.

To bring rural India into the main stream of nation building drive, it has been decided to provide telephone facility in every panchayat (numbering nearly 221,000) within the eighth Plan period. In addition to coverage, however, greater emphasis would be on providing reliable telecom links through the induction of state of art technology. During the last 6 months, 663 long distance public telephones have been provided.

The drive to improve the existing telecom services has been intensified so that along with reliability, customer satisfaction is also generated and the public perception about the service is improved.

Some of the important service parameters relating to the successful attempts in respect of local calls, STD calls, telex and manual trunk efficiency and the delivery of telegrams within the 12-day light hours between 500 large stations are: local—95 per cent, STD calls—83 per cent, manual trunk efficiency—81 per cent and delivery

of telegrams—83.8 per cent. These performance parameters compare very favourably with the targets fixed for the year ending April 1990.

Progressively, the service points having direct interface with the members of the public, viz, telephone subscribers' line testing, fault booking and clearance service, manual trunk exchanges, directory enquiry, telephone billing, etc. are computerised.

With a view to modernising the network strictly on the basis of indigenous technology, achievements have been made: eight Mbs optic fibre system produced by TRC/III was commissioned between Shimla and Moshbra. Subscriber controlled automatic STD for analog electronic exchange (FETEX-100L) has been commissioned at Tis Hazari Exchange, Delhi.

By mobilisation of internal resources through speedy realisation of telephone revenue and diversification of high revenue earning services, it has been planned that most of the plan resources required during the current Plan would be made available internally by the Telecom Department.

With a view to extending the subsidised telecom services to the various sectors, the telecom tariff has been rationalised with effect from 1.4.1990. Its features are: 25 percent concession in telephone rental for the institutional telephone installed in recognised schools, colleges, polytechnics and universities; 25 percent concession in rental has been given up to two telephones in respect of non-residential telephones in the homes for aged, infirm, handicapped, deaf and dumb; 50 percent concession in rental has been given on leased circuits for data and speech transmission by newspapers and news agencies.

For popularising the use of telephones in the rural sector, telephone rental has been reduced for exchanges up to 100 lines capacity mostly in rural areas and charges for trunk calls made from rural LDPTs have been reduced by 50 per cent.

Cable-Cum-Wireless Rural Telephone System Developed

90WD0657 New Delhi PATRIOT in English 28 Jul 90
p 6

[Text] Bangalore, 27 July (PTI)—A low cost alternative to the Department of Telecommunication (DOT) plan of setting up one public call office (PCO) for every village has been drawn up by the Indian Institute of Technology (IIT), Madras, which has developed a cable-cum-wireless rural telephone system.

It consists of base station and several remote rural Automatic Exchange (RAX) interconnected by mean of a digital wireless network. Within a particular village and from village to the remote station the link will be by cable. The system can be plugged into the national telephone network and can also provide access to special wireless sets.

Developed by a team, led by Dr Ashok Jhunjhunwalla, professor, electrical engineering department, IIT, Madras, the system used Time Division Multiple Access (TDMA) technology and achieves considerable economy by minimising use of cables.

Center Urged to Develop Long Term Telecom Policy

90WD0658 New Delhi PATRIOT in English 25 Jul 90
p 10

[Text] The Associated Chambers of Commerce and Industry of India (ASSOCHAM) has suggested formulation of a long term telecom policy clearly demarcating the area of responsibility between the government and the private sector and facilitating access to latest technology with a view to achieve the target of 20 million direct exchange lines (DEL) by the end of this century.

Assocham background paper prepared for the workshop on Telecommunication for Growth of National Economy to be held in Bangalore on 30 July has suggested that for the faster development of the national telecommunication network, the Government should concentrate more on service aspect and leave the manufacturing and supply of equipment to the private sector. This has become all the more necessary in view of massive investment of Rs 19,000 crore during the 8th Plan and Rs 28,700 crore in the 9th Plan required to meet the target of 20 million DEL by the year 2000 AD.

Assocham has pointed out that while the government has widened the scope for private participation in the production of RAX, PABX and EPABX, there are still a number of areas exclusively reserved for the public sector. The government should involve the private sector's participation in the production of MAX which require high capital investment. The policy should also spell out areas where foreign equity and technology transfer could be encouraged.

According to Assocham, the telecom policy should aim at expansion of telephone network in urban and rural areas, improving the quality of service and providing state-of-art communication system like electronic mail, ISDN, etc., which has become necessary in the context of enlarged economic activity and for accelerating external trade and investment.

The expansion of telecom in India has been handicapped because of non-availability or shortage of switching system. As per present estimates, India would be able to produce six million DELs by 2000 AD leaving a shortfall of about 9.5 million DELs. Also, a substantial part of the existing exchanges have become old and outdated. If the entire telecommunication system has to become digital in the next 10 years, the existing lines would have to be phased out over the period. Assuming that replacement demand would be around 2.5 million DELs, the short-fall between demand and production would be 11.5 to 12 million DELs involving a huge investment of nearly Rs 50,000 crore.

In view of government's limited resources, the participation of the private sector with the back-up of foreign equity and technology is the only way out to make the country's telecommunication services keep pace with the demands of growing economy and to achieve international standards.

Telephone main line density per 100 persons is among the lowest in India—0.06 for rural and 2.0 for urban areas as against 11 percent in Malaysia, 25 percent in South Korea, 30 percent in Taiwan, 50 percent in France, 60 percent in West Germany, 70 percent in USA and 80 percent in Sweden. The lower line density coupled with obsolete equipment has left the telecommunication facility in India in poor shape. Industry and trade and the economy generally, which are heavily dependent on the success rate of phone calls have suffered a great deal. Also, the poor quality of service is particularly in evidence in external trade since the equipment used in India is not of international standards.

New Radio Station Inaugurated at Nizamabad

*BK0909114790 Delhi Domestic Service in English
0830 GMT 9 Sep 90*

[Text] The minister for information and broadcasting, Mr. P. Upendra, today inaugurated a new radio station at Nizamabad in Andhra Pradesh.

Speaking on the occasion, Mr. Upendra said that the total number of radio stations in the country will go up to 205 from the present 102 in the next six months. The minister said that a proposal has been submitted to the Planning Commission to start second television channels in another six state capitals in the country. He said a decision to start Urdu news bulletin from Lucknow and Hyderabad TV stations will be taken shortly.

IRAN

Television Station Commissioned in Zahedan

*LD0109132190 Tehran Domestic Service in Persian
1030 GMT 1 Sep 90*

[Summary] A new 10-watt satellite ground receiver transmitter station was commissioned in the border region of Mirjaveh in Zahedan. The station beams Iranian TV network 2 programs to the region on channel nine.

Another 10-watt ground receiver beams the TV network 1 programs to the villages of Haftkadeh and Zarab from the district of Vazinabad of Dehloran on channel 11.

New TV Repeater Commissioned in Siah Cheshmeh

*LD0209054190 Tehran Domestic Service in Persian
1630 GMT 1 Sep 90*

[Text] A TV relay station for second network programs in Siah Cheshmeh, with a 500 watts broadcast power,

has been constructed and commissioned. As a result of the commissioning of the relay, residents of Siah Cheshmeh district of Maku and border villages in the region will be able to view programs of the second network of Vision of the Islamic Republic of Iran on channel 7.

PAKISTAN

Launching of Satellite Reported

Badr I, Pakistan's First

*90WT0138 Lahore THE PAKISTAN TIMES in English
17 Jul 90 p 1*

[Text] Karachi—Pakistan joined the club of technologically advanced countries in the field of space sciences by launching its first satellite, Badr-1—a complete—indigenous spacecraft into the orbit early Monday morning.

China's X1 Chang satellite launching pad was used for throwing Badr-1 into orbit at 5.5am Pakistan Standard Time (PST) Monday morning.

According to latest monitoring observations the satellite is successfully orbiting around the earth every 98 minutes.

A high-level delegation from Pakistan comprising Mr Hasan Zaheer, Cabinet Secretary, Dr M. Shafi Ahmad, Chairman, Suparco and Mr Sikandar Zaman, Deputy Chairman, Suparco visited the X1 Chang launched Center from July 6 to 11 to witness the preparation of Badr-1 launch.

APP adds: The Suparco-built satellite was launched over the Pacific Ocean between Philippines and Taiwan on a Chinese rocket (long march 2E) and is expected to help improve the weather information collection in Pakistan.

The uplink of Badr-1 consists of two command receivers operating simultaneously in the UHF range, only one of which makes transmission at a given time. The downlink consists of two VHF transmitters. Other on-board experiments are in-house monitoring of sub-systems through telemetry and the telecommand of satellite. Two primary ground stations with facilities for tracking, telemetry and telecommand of Badr-1 satellite are already in operation at Karachi and Lahore.

The objectives of Badr-1 project are: to test the performance of indigenously developed satellite sub-systems in space environment, to perform experiments in real time voice data communications between two user ground stations, to demonstrate store-and-forward type message communication, and to educate the country's academic, scientific and amateur community in the tracking and use of low-earth-orbiting satellites.

Badr-1 came in the field of view of Suparco's tracking stations at Lahore and Karachi for the first time around

0715 hours when both the stations tracked the satellite successfully for a period of about eight minutes. It was again tracked in the next orbit at 0858 hours.

Having tracked Badr-1 successfully and observed that the satellite performance is entirely satisfactory, the stage is set for Suparco's scientists to conduct the planned experiments which comprise the monitoring of the performance of satellite sub-systems, voice communication experiment between Karachi and Lahore via satellite and store-and-forward type of digital communication experiment.

The successful culmination of Badr-1 project of Suparco is a testimony to the importance attached and the support given to the space programme of Pakistan by the present democratic government and personally by the Prime Minister, Mohtarama Benazir Bhutto, who is the President of Pakistan Space Research Council—the supreme body which directs and controls the space science and technology programme of Pakistan.

President, Prime Minister's Messages

90WT0138 Lahore THE PAKISTAN TIMES in English
17 Jul 90 p 10

[Text] Islamabad—President Ghulam Ishaq Khan Monday said that with the launching of Pakistan's first satellite, Pakistan has become the first Islamic country to enter the area of peaceful application of outer space.

In his message he said, "Pakistan has been able to locally design and fabricate a scientific earth satellite. It is a matter of pride for the entire nation. This historic accomplishment should undoubtedly raise our hopes and reinforce our faith in the ability of our scientists, engineers and technicians to successfully apply their knowledge and skills for the technological advancement of the country, leading to national progress and prosperity. It is the work of dedicated people serving with Suparco, to whom go all our thanks and felicitations. They deserve every encouragement.

"I take this opportunity to express my appreciation for the cooperation extended to Suparco by the Chinese space authorities in facilitating the launching of Badr-I on their Long March 2 E launch vehicle. It marks yet another glorious example of cooperation between our two countries. The successful launching of the new launch vehicle itself adds a proud chapter to China's story of success in the field of space research.

"I once again congratulate Suparco for having accomplished a difficult task and wish it all success in its future undertakings".

The Prime Minister, Mohtarama Benazir Bhutto, in her message on the occasion, said the successful launching of Pakistan's first satellite is a source of pride and joy for the entire nation.

She said: "This signal achievement provides vivid testimony to the enormous potential and dedication of our scientific community and represents an event of great amount in the country's march towards technological modernization. In fulfilling this mission our scientists have lived up to the hopes and expectations vested in them by their compatriots.

"It gives me great pleasure to felicitate the management of Suparco for directing the Badr-I project to this happy conclusion. The engineers and scientist responsible for the design, development and fabrication of the satellite deserve our particular appreciation and admiration.

"I should like to express deep gratitude to the Chinese space agency for their valuable cooperation in the launch of our indigenously developed satellite.

"I am confident that Pakistan's scientists and engineers will continue to make their valuable contribution towards the attainment of these objectives".—APP.

SUDAN

Cooperation Agreement Signed Between SUNA, JANA

EA0209092890 Khartoum SUNA in Arabic 1716 GMT
1 Sep 90

[Excerpts] Khartoum, 1 September (SUNA)—A program for implementing the cooperation agreement between the Sudanese News Agency, SUNA, and the Jamahiriyyah News Agency, JANA, which was signed in December 1989 in Tripoli, was agreed upon in Tripoli recently, according to Mr. Abu Bakr Waziri, SUNA's deputy director, who returned to Khartoum today after leading the agency's delegation to Libya. He said the agreement fulfills the decisions of the Sudanese and Libyan information and cultural delegations in Khartoum last June.

Mr. Abu Bakr Waziri further said the agreement provides for opening a direct line for an acoustic signaling device [khatt buqiyy] between the two agencies, as well as enhancing direct technical communications to monitor the agencies' transmissions to exchange information and (?technical) documents. He said the agreement also included exchanging news research and (?articles) to be disseminated extensively by the press and information organs in the two countries, pointing out that the exercise will provide a great opportunity to address Libyan public opinion as well as the Sudanese community in [words indistinct]. He further added that they agreed to [word indistinct] reporters and representatives of both agencies to each country. [passage omitted]

Mr. Waziri said that [words indistinct] recently a special aerial had been beaming SUNA transmissions to the Maghreb as a preliminary step to transmit SUNA in Arabic to the whole region. [passage omitted]

Cable Television Developments in Rostov-na-Donu

PM1109091290 Moscow IZVESTIYA in Russian
7 Sep 90 Morning Edition p 2

[Report by Vladimir But under the "Direct Line" rubric: "Cable Television Developing"]

[Text] Rostov-na-Donu—The Rostov Gorispolkom [City Soviet Executive Committee] has confirmed the alternative broadcasting development program proposed by the Cable Television Association created in the city.

Of late cable television has been intensively developing in the oblast and has been reaching the homes of the oblast's cities and villages through the efforts of cooperative members and youth associations. The demand for alternative television broadcasting is growing. Therefore when housing and municipal services were combined in Rostov a major state commercial enterprise—a cable television association—was created. This includes reliable partners engaged in the production of cable and reception and transmission systems. This will make it possible to create a modern 6-channel communications system. Subscribers will be able to access the international computer network and pick up satellite television. The association leadership promises other services too, for example, an apartment alarm system. The war disabled will receive concessionary treatment here.

The gorispolkom will soon obtain its own channel on state television, and the prospect of receiving one's own channel on alternative broadcasting is now opening up.

Yerevan Reports Communications Cut in NKAO

NC0809063590 Yerevan Domestic Service in Armenian
1630 GMT 6 Sep 90

[“Report from Stepanakert, 6 September”—radio headline]

[Excerpts] The decade-long violation of the rights of the Armenian people of the Nagorno-Karabakh Autonomous Oblast [NKAO] by Azerbaijan is continuing. The leadership of the neighboring republic is resorting to all kinds of actions, well aware that they may generate a wave of indignation in Artsakh [NAKO] and Armenia, which in turn would further exacerbate the already complex situation in the region. One gets the impression that Azerbaijan is intentionally trying to instigate Armenians to commit illegal actions on the eve of elections in Azerbaijan. There can be no other explanation for what is taking place in the NKAO under the guise of the defense of the sovereign rights of that republic. Sadly, this is being done with the assistance of the Internal Affairs Ministry troops in a republic which claims to be civilized.

This time around the focus of the instigatory acts was Stepanakert airport, where an open mockery of Soviet citizens of Armenian origin has been taking place for the last three days.

Today, 6 September, in addition to everything else, the oblast's telephone, cable, and telex connections with the outside world have been completely severed. It was a miracle that a few urgent messages on the situation reached Moscow. This is what they said:

To USSR Internal Affairs Minister Bakatin and the USSR civil aviation minister: On 4 September the Internal Affairs Ministry troops at Stepanakert airport impounded a YAK-45 airplane of the Armenian Civil Aviation Department for no reason. Only at the end of the day and following the intervention of the union departments was it allowed to fly. On 5 September this illegality was repeated and six airplanes were impounded on the orders of the airport commandant who said he was acting on the orders of Ovchinnikov, the interim acting commandant of the state of emergency area. [passage omitted on situation at airport]

[Signed] The pilots of the impounded airplanes: Ashot Chilingaryan, Aleksandr Fiderenko, Ashot Khachatryan, Samuel Ovanesyan, Garnik Garibyan, and Vrstad Bagdasaryan.

To USSR Internal Affairs Minister Bakatin: Hundreds of passengers are gathered at Stepanakert airport, yet six YAK-40 airplanes have been impounded here by the internal troops. According to information we have obtained, you have spoken to Azerbaijani leaders and your subordinates. However, we have the impression that Colonel Ovchinnikov, the interim acting commandant of the state of emergency area, is obeying not Bakatin but Polyanichko. [passage omitted on situation at airport]

[Signed] USSR People's Deputies Zori Balayan, Vachakan Grigoryan, Vaan Gaprielyan, Boris Dadamyan, and Genrik Pogosyan.

USSR People's Deputies from the NKAO Semyon Babayan, chairman of the executive committee of the oblast party committee; Maksim Mirzoyan, chairman of the executive committee of Stepanakert city party committee; and Valeriy Atadzhanyan, first secretary of Stepanakert city party committee, have sent a cable to Pervyshin, USSR minister of communications, which reads: Because of the failure to take effective measures against those who cut the NKAO's telephone and cable lines to the outside world for a week in January 1990, this illegal action has now been repeated. Since 4 September, the NKAO has been without means of communicating with Moscow, Armenia, and other cities. This anti-state stance of the Azerbaijani communications organs manifests itself in the blockade of all road and air routes [words indistinct]. Sadly, our numerous appeals to the relevant union organs have produced no results. It is hard to believe that the USSR Communications Ministry's leadership is not in a position to bring its subordinates in Azerbaijan in line. The population of the NKAO is deeply indignant over the criminal acts of the Azerbaijani leadership, which aim to further destabilize

the situation in the region. We demand that you personally take urgent and effective measures to restore communications between the NKAO and the outside world and to preclude the repetition of such a barbarity. By so doing you will help avert a tragic conclusion to these incidents. [Words indistinct] there is growing impression

that Azerbaijan has declared its sovereignty so that it will be able to violate the basic rights of the Armenians of the NKAO with impunity. Let us add that for the last three days no freight cars have arrived at the Stepanakert railway station and only a two-day supply of bread remains. The NKAO is now virtually under siege.

EUROPEAN AFFAIRS

EC Telecommunications Council Meets 28 Jun

Meeting Results

90AN0354 Brussels EUROPE in English
30 Jun 90 pp 9-10

[Report: "Telecommunications Council Results: Late Political Agreement on Terminals—the ONP Directive, the Conclusions on ISDN and a Resolution on Radiofrequencies Are Adopted, But Not the Declaration on 'Wide Bands'—Declaration on Central and Eastern Europe—Other Items"]

[Text] Luxembourg, 29 June (EU)—The Telecommunications Council ended late but on a positive note with the political agreement reached late Thursday evening [28 June] on the main topic of the session, the directive concerning telecommunications terminal equipment, including the mutual recognition of their conformity. This was stressed by the Council president, Ireland's deputy minister for European affairs, Mrs. Maire Geoghegan-Quinn. (Ireland's telecommunications minister, Mr. Ray Burke, was unable to leave Dublin.) During the final press conference, she recalled that it will be possible to market terminal equipment manufactured in the EEC in the Community as a whole after a single-type approval procedure, once the directive comes into force (18 months after its formal adoption). National standards will be considered equivalent or, even better, there will already be European standards established by the ETSI [European Telecommunications Standards Institute]. Mrs. Geoghegan-Quinn declared that she "was happy that the Council was able to progress towards the internal market in the telecommunications sector, given the importance of the latter."

Commission Vice-President Mr. Pandolfi insisted on the completion, through the adoption of the ONP directive, of an important process—possibly the most important one in the area of telecommunications—which will lead to the opening of public networks to private operators in harmonised conditions. During the session, the Commission and the Council confirmed their agreement of 7 December 1989 to link the liberalisation of the internal market in telecommunications to its harmonisation. Therefore, the Council hopes that "now that the ONP [Open Network Provision] will come into effect, the Commission will adopt its draft directive on the liberalisation of telecommunications services" as early as possible. EUROPE recalls that in December 1989, the Council and the Commission agreed on the substance of that directive, with the Council opposing the selection of the legal basis by the Commission, which chose Article 90(3) EEC, enabling it to act alone. They decided to separate the substance and the form. The deadlock will probably be broken by the Court of Justice.

Here are the results of the session:

1. *Terminal Equipment*: The Council agreed on the substance with a view to the adoption of a common position on the directive concerning the approximation of national provisions concerning telecommunications terminal equipment, including the mutual recognition of their conformity.

2. *Open Network Provision (ONP)*: Without a debate, the Council approved the directive concerning the provision of an open telecommunications network. The directive includes the harmonisation of access and use conditions for telecommunications networks and public services (where applicable). It aims at facilitating the use of telecommunications networks or public services and the provision of services within the Member States or between the latter by companies or legal persons established in a Member State other than that of the company or the legal person which will use the services provided. The directive will enter into force on 1 January 1991.

3. *Integrated Services Digital Network (ISDN)*: The Council adopted the following conclusions: "The Council welcomes the 1989 Commission report on the state of progress of the introduction of ISDN in the European Community and notes that the Member States have made substantial progress in the implementation of ISDN services. The commitments made by the telecommunications organisations under the CEPT [European Conference on Post and Telecommunications] memorandum of agreement and the significant progress achieved in the elaboration of the necessary standards within the ETSI framework are encouraging signs of the widest possible pan-European cooperation that it is possible to establish and that the Council supports."

The Council recognises the need to intensify efforts in the area of marketing and, in this respect, it notes the Commission proposal to establish a European forum of ISDN users which would take account of the efforts deployed at national level in the Member States, and that on the elaboration of a "European ISDN atlas". The Council would also welcome the participation of telecommunications organisations in a presentation of the European ISDN on the occasion of the Telecom fair which will be held in Geneva in 1991.

The Council invites the Commission, taking account of the STAR assessment, to review the possibilities of supporting ISDN infrastructure and implementation in the less-favoured areas of the Community, in order to encourage as much as possible the provision of advanced telecommunications technologies. Since the success of ISDN will depend on the availability of terminals, the Council invites European industry to make all possible efforts to have the appropriate terminals available in due time.

The Council considers that the satisfactory progress achieved up until now will facilitate the development of ISDN in Europe in the interest of industry, those offering services, and users, and invites all parties to continue to

coordinate their efforts as far as possible in order to implement ISDN in Europe between now and 1992.

4. *Integrated Wide Band Telecommunications:* Vice-President Pandolfi submitted an oral report on the new forms of activities in the field of integrated wideband telecommunications.

5. *External Policy With Central and Eastern European Countries:* After having favourably received the Commission's communication on the issue, the Council adopted the following conclusions: "The Council has proceeded, on the basis of the conclusions of the European Council in Dublin, to a preliminary examination of the Commission's communication on the role of telecommunications in EC relations with Central and Eastern European countries. The Council has requested the Permanent Representatives Committee to make a careful study of this communication in the light of observations formulated by the different delegations. The Committee is invited to prepare a detailed project of conclusions for the next Council session (planned for November—EUROPE Ed.).

6. *Cooperation on Postal Issues:* The Council has noted a report by Commission services on preparatory work carried out on the Green Book on development of postal services that it hopes would be finished before the end of the year. The Council reached the following conclusions: "The postal services will continue to play an important economic and social role in the EC, in particular in the context of internal market achievement; the question of the Community dimension of postal services should be studied in depth and the Commission is invited to study the areas and options which could be the object of proposals in light of the opinions expressed today."

7. *European Conference on Post and Telecommunications:* The Council has effected a brief debate on cooperation between the EC and the CEPT in the field of telecommunications.

8. *Uruguay Round:* The Council has noted a Commission paper on the "telecommunications" aspect in Uruguay Round negotiations.

9. *Trans-European Networks:* Vice-President Pandolfi submitted to the Council the measures necessary to promote the development of the main European networks—the "European nervous system," as he likes to call it.

10. *Digital Cordless Telecommunications:* The Council has noted the work effected concerning a draft recommendation on the coordinated introduction of digital cordless telecommunications within the EC and a draft directive relating to frequency bands to be designated for this coordinated introduction.

11. *European Cooperation on Radio Frequencies:* The Council has adopted a resolution concerning the reinforcement of European cooperation in the field of radio

frequencies, in particular, for services with Pan-European vocation, which aims at:

a. reinforcing cooperation with a view to allocating in due course the frequencies which are sufficient to mobile applications by satellite; b. promoting the most efficient use of frequency spectrums; c. establishing joint European positions with regard to the use of frequency spectrums in the context of frequency harmonisation at international level. The Council also noted with satisfaction the reform, in progress, of planning mechanisms and coordination of radio frequencies undertaken by the CEPT.

Statement on Market Reciprocity

Brussels EUROPE in English 2-3 Jul 90 p 9

[Report: "Telecommunications/Terminals: Vice-President Pandolfi Says Political Agreement on the Directive Concerned is Well Balanced—France and Belgium Are Not Won Over—Commission Statement on External Relations Aspect"]

[Text] Luxembourg, 2 July 1990 (EU)—The vice-president of the European Commission, Filippo Maria Pandolfi, considered, during the final press conference of the Telecommunications Council on 28 June, that political agreement on the directive concerning mutual recognition of conformity of telecom terminal equipment ("terminals" directive) was well balanced. Certain Member States (Ed.: France, Belgium, which did not take part in the agreement, Italy and Spain) fear the risk of connection with public terminal networks (telephone, telex, telecopying, etc.) intended to be used for internal use only. These countries had insisted upon the enforcement of a legal presumption rule (of connection to public networks) for all terminals; they were followed for only one terminal (in addition to those which are intended for connection to public networks): the appliances which use radiofrequencies are included in the directive's field of application. Other Member States (FRG, United Kingdom, and the Netherlands) did not wish for this notion of presumption (Ed.: that a terminal can be connected to the public network and must therefore be submitted to approval procedure instead of being the object of a simple statement made to the national inspection authorities) to be too extended even if active interfaces are possible between terminals not to be connected to public networks and the latter (internal telecom installations within a company, for example).

As well as the addition of cordless telephones within the scope of the directive, it stipulates that the manufacturer or the supplier should give proof, upon request from the approved body, of the destination of the equipment not intended to be linked with the public sector, not only in relation to its design but also its functioning and the market segment it is aimed at.

Finally, with regard to the external dimension of the telecom terminal equipments sector, the Commission

has brought several modifications to the joint Council-Commission declaration calling for the respect by third countries of the principle of reciprocity: "The Council and the Commission recognise that implementation of the present directive will create an open and unified EC market for telecommunications terminal equipment, and that it will hence be necessary, on the one hand, for third countries to offer EC manufacturers an effective and comparable access to their markets, and, on the other hand, for fair competition conditions to prevail.

"On this matter, the Council and the Commission reaffirm their will to ensure that the opening of the EC market for telecom terminal equipment is not effected in a unilateral fashion, and without compensation.

"The Commission undertakes to report, on the basis of the above, at least six months before implementation of the directive, and then in a regular way, carrying out the necessary consultation at EC level with businessmen and organisations concerned.

"In particular, if the Commission notes, in the light of these consultations and on the basis of information supplied by Member States, that the EC manufacturers do not benefit, compared with the market of certain third countries, from an effective access comparable with that offered by the Community market to third-country manufacturers or that they are victims of unfair commercial practices, the Commission will recommend appropriate measures to the Council, according to the procedures provided for under Article 113 of the Treaty and in respect of the obligations which fall upon the EC by way of the international agreements, both multilateral and bilateral".

EC Proposes Cordless Phone Standards

*90AN0335 Brussels EC INFORMATION MEMO
in English No P-32, 8 May 90 pp 1-2*

[Article: "Harmonization of Cordless Telephones in the Community and Coordination of Frequencies"]

[Text] The Commission has just taken a fresh initiative to encourage the development and distribution in the Community of mobile communications equipment. It has just presented to the Council a proposal for a directive and a recommendation on the Digital European Cordless Telephone system (DECT).

The new cordless telephone system represents the second generation of mobile telephone services. It can be used by the consumer not only at home, as is already the case with existing equipment, but also in the office (where it is connected to the automatic switching unit) or in the street (near public telepoints). It is no longer necessary to

lay expensive and complex cables to be able to use it. In comparison with existing systems (which are also often incompatible with each other), there is an improvement in the quality of retransmission. It takes up fewer frequencies and allows a much greater density of sets on the network than is possible with current equipment. With low costs, it will be accessible to a large number of users (some consultants estimate that the DECT market in Europe will reach the 100 million mark by the end of the century).

The Commission is presenting to the Council proposals for a directive and a recommendation. The directive will ensure the availability after 1992 of a band of common frequencies for DECTs in the Community, this being a prerequisite for the successful introduction of a completely harmonized DECT service. The recommendation aims to promote the general, coordinated introduction of the DECT at the end of 1992, thereby intensifying the existing momentum of the market in that direction.

The technical standard on which the DECT is based has been prepared by the European Telecommunications Standards Institute (ETSI), in association with industry, operators and users. Several European firms (Philips, Ericsson, Ascom, Alcatel and Hegenuk) have already signed an agreement stating their intention to implement the DECT system by the end of 1992, and the European association of portable communication systems manufacturers (ESPA) has confirmed that equipment will be available by that date.

The DECT proposals follow on directly from two previous initiatives already on the Council table: the GSM, which represents the second generation of car phones (with improvements over the first generation including faxing facilities and guaranteed confidentiality of communications), and theERMES system, which represents the future of radio paging—bleepers, semaphones, etc.—with the ability to transmit much more complex messages than those possible using existing systems.

The coordination of frequencies for the DECT forms part of the Commission's overall desire to step up the coordination of radio-paging frequencies in Europe, which has now found concrete expression in its adoption of a proposal for a Council resolution in this field.

In this resolution the Commission stresses the criteria of transparency, independence and expansion which must be met by such coordination. It notes the restructuring which has been carried out by the CEPT (European Conference of Postal and Telecommunications Offices) towards this end. It supports the setting up of a European radio-paging office, which would be a permanent body with the task of proposing measures to be taken to achieve this objective.

BELGIUM**Digital Telephone Venture With USSR**

90AN0344 Groot-Bijgaarden DE STANDAARD
in Dutch 20 Jun 90 p 1

[Article by S.M.: "Bell Signs BF-100-Billion Contract in Moscow"]

[Text] Moscow—On 19 June in Moscow, the Bell Telephone Company of Antwerp signed a telecommunications contract with the Soviet Union. The contract calls for the establishment in Leningrad of a joint factory that will produce "System 12" digital telephone exchanges. Bell is the first Western company to set up a joint venture for digital telecommunications equipment in the Soviet Union. The project is worth 100 billion Belgian francs.

The contract was signed sooner than expected. Siemens of West Germany is also on the verge of signing a telecommunications contract with the Soviet Union, but the Soviets wanted Bell Telephone to have the honor of coming in first. The contract was signed in the presence of Belgian Vice Prime Minister Schiltz, Foreign Minister Urbain, and PTT Minister Colla, and Soviet Communications Minister Pervyshin.

The first clause of the contract concerns the establishment of a joint factory in Leningrad, scheduled to be operational in early 1992 with an annual production capacity of 1.5 million digital telephone lines. Sixty percent of the joint venture's capital will be owned by the USSR company Krasnaya Zarya; Bell Telephone will own the remaining 40 percent. A Belgian citizen will be appointed director general of the venture, dubbed "Len-Bell Telephone."

Seventy percent of the venture's output will go to the Soviet Union, 15 percent to the Indian company Chemimpex, and the remaining 15 percent to Bell Telephone itself. This arrangement will give the Soviet Union hard currency revenues.

The second clause of the contract provides for the establishment of another joint venture for the production of microchips for System 12 switching gear. For this plant, slated to be operational by 1997, Bell Telephone is still awaiting the approval of COCOM, the agency responsible for overseeing exports of Western technology to the East Bloc.

Finally, the contract stipulates that the Soviet Union will purchase 250,000 digital System 12 lines from Bell Telephone in Antwerp. This direct sale to the Soviet Union and the projected revenues of the two joint ventures will amount to BF 100 billion, spread out over the next 20 years.

Funding for the contract has not yet been finalized; a warranty from the Belgian Delcredere office [government agency that secures Belgian financial transactions abroad] is still pending. Bell Telephone Exports Director

Chris Morel, who won the Soviet contract, is optimistic and expects funding to be concluded by October. According to Morel, "this is a unique opportunity that cannot allow to slip through our fingers."

CYPRUS**CYTA To Join Worldwide Communications System**

NC0509184390 Nicosia CYPRUS MAIL
in English 5 Sep 90 p 5

[Text] Cyprus News Agency [CNA]—Cyprus Telecommunications Authority [CYTA] plans to participate in the construction of a submarine fiber cable system, called SEAMEWE2, which will provide digital interconnection worldwide.

SEAMEWE2 will be a joint production by 35 countries from Europe, the Middle East, and Asia, starting from France and continuing to Singapore, with Cyprus being the telecommunication node, a CYTA expert told CNA.

Through its link with SEAMEWE2, Cyprus plans also to handle the routing of telecommunications services through fiberoptic cable interconnection from neighboring countries to the west.

The advantages of SEAMEWE2 system include the possible connection of Cyprus and all the other member-states of the group with the data bank of BBC, or any other broadcasting station. The callers will be able to see themselves on screens.

The expert said the SEAMEWE2 system was the alternative solution to satellites because costs will also be lower. The cable system is expected to be ready in 1994.

FEDERAL REPUBLIC OF GERMANY**Deutsche Welle to Strengthen External Broadcasting Role**

LD0309175390 East Berlin ADN International Service
in German 1604 GMT 3 Sep 90

[Text] Cologne (ADN)—The Deutsche Welle [DW] board of directors in Cologne today spoke in favor of a "significant strengthening of DW's role in order to represent a future united Germany in the world". The chairman of the DW board of directors, Johannes Gerster, said after a session of the supervisory board body in Cologne that with the forthcoming dissolution of the GDR foreign radio station Radio Berlin International (RBI), DW will be a foreign-language broadcasting station which is "Germany's voice in the world". In order to be able to meet its legal obligations in this new situation, DW needs "rapid personnel, financial, and technical support".

Gerster said that DW has to make continued use of the RBI short-wave transmitters with a smooth transition. Only in this way can the frequencies for German foreign broadcasts be secured.

The chairman of the board of directors also urged rapid agreement between the federation and laender on restructuring the electronic media landscape in a united Germany. For the purposes of organizing a uniform foreign broadcasting station it is useful to integrate Deutschlandfunk's foreign-language programs into DW. Integrating DW and RIAS-TV would also be needed to build up the external television service.

FRANCE

French Telecom Industry Presents White Paper

90AN0283 Paris *ELECTRONIQUE HEBDO* in French
12 Apr 90 p 4

[Article by Michel Heurteaux: "Telecommunications: A 'White Paper' for Europe"]

[Text] As the date of the single market of 1993 approaches, the French telecommunications industry will no doubt have to rethink its strategy and define new areas of activity. At the presentation of the 1989 annual report of the sector—a Fr 24-billion turnover and Fr 2-billion trade surplus—the Association of the Telephone, Telegraph, and Related Data Communications Industries (SI3T), which since the end of March has become the platform for the telecommunications industry, unveiled its White Paper. This document, entitled "The SI3T and Europe," provides analyses of the new situation after the EC restructuring and makes a number of recommendations as to how to cope with it.

In view of new regulations resulting from the harmonization and liberalization of telecommunications services in Europe, French manufacturers reconfirmed their support to a loyal and generalized implementation of the recommendations of the European "Green Paper." However, they pointed out that telecommunications services differ from other services in that they require heavy research investment and permanent and universal operation.

With a view to this new telecommunications structure, SI3T Chairman Jacques Payer advises French industry to examine current developments carefully. The White Paper makes a number of recommendations regarding subjects like EC directives, certification problems, Southeast Asian equipment imports, government procurement, etc.

Standards and Finance

The SI3T emphasizes the following in particular:

1. The harmonization of standards. This is a prerequisite for effective interoperability of networks, services, and terminals. Therefore, the European Telecommunications Standards Institute (ETSI) deserves the loyal support of all EC member-states.

2. Funding for research and development. Funding levels should remain at least on a par with those in Japan and the United States. Long-term research should be financed by EC member-states in the framework of such multinational programs as the Research in Advanced Communications for Europe (RACE) program and the European Strategic Program for Research in Information Technologies (ESPRIT). Technology transfers should be guaranteed between all study centers.

3. According to SI3T, harmonization of intellectual property rights is linked to the existence of a strong European research capability. It also points to the fact that legislation differs greatly in the 12 EC member-states and calls for the establishment of a structure vested with sufficient authority to effect a real harmonization in Europe.

Harmonization and Reciprocity

4. Specific government subsidies to exports remain necessary because in exporting countries other than Europe, Japan, and the United States, they generally depend on state-guaranteed funding. French manufacturers emphasize that the different procedures used by EC states often lead to competition on the financial rather than on the technical performance level. This could result in conflicts that would damage the Community's general interest and, in the event of the implementation of a real European foreign policy, it might be useful to harmonize these subsidies to ensure the success of European exporters in the face of their competitors.

Through this series of recommendations, the SI3T has clearly opted for a pragmatic approach. Although French technology is at least as advanced as that of its major competitors, and although France has a surplus trade balance, the SI3T reckons that this position can only be maintained through harmonization and a real reciprocity with competitors. The White Paper not only enables the telecommunications sector to set out their major objectives, it is also an opportunity for manufacturers to show that they are ready to play the 1993 game and to play it, as chairman Jacques Payer says, "without being either naive or angelic."